

Discover the Exciting New Features in Java 11 and 12!

Java, the popular programming language used worldwide, continues to evolve and improve with each new release. The recent releases of Java 11 and Java 12 have brought forth exciting new features and enhancements that Java developers can take advantage of. In this article, we will explore some of these new features, their benefits, and how they can enhance your Java development experience. So, let's dive in and uncover what's new in Java 11 and 12!

Java 11 Features

Java 11, released in September 2018, comes packed with numerous noteworthy features, making it a must-have for any Java developer. Let's take a closer look at some of them.

Local Variable Syntax for Lambda Parameters

One of the significant changes brought about by Java 11 is the use of `var` for lambda parameters. With this feature, developers can now use the `var` keyword, similar to how it is used for local variables. This change brings more flexibility and conciseness to lambda expressions, resulting in cleaner and more readable code.



Java 11 and 12 – New Features: Learn about Project Amber and the latest developments in the Java language and platform

by Mala Gupta (1st Edition, Kindle Edition)

★★★★☆ 4.4 out of 5

Language : English

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Text-to-Speech : Enabled

Screen Reader : Supported



HTTP Client API

Java 11 includes a new standard HTTP client API (`java.net.http`) that simplifies and streamlines HTTP communication. This new API provides a clean and easy-to-use interface for sending HTTP requests, handling responses, and managing connections. It also supports HTTP/2 and WebSocket protocols, making it an excellent choice for building efficient and scalable applications that rely on web services.

Improved Container Support

Java 11 brings improved container support through the of new command-line tools and APIs. With the new tools, developers can easily create optimized Docker images for Java applications, reducing their size and startup time. Additionally, Java 11 includes better support for running Java applications in containers by recognizing container memory limits and adjusting internal processes accordingly. These enhancements make it easier and more efficient to deploy and manage Java applications in containerized environments.

Launch Single-File Source-Code Programs

Prior to Java 11, running a single-file program required compiling the source code into a class file and executing it. However, Java 11 introduces a new command-line tool, "java", that can directly launch single-file source-code programs. This feature simplifies running short Java programs by eliminating the need for an

explicit compilation step, improving the convenience and speed of code execution.

Java 12 Features

Building upon the advancements brought by Java 11, Java 12 introduces additional exciting features that further enhance the Java programming experience. Let's explore some of these new features.

Switch Expressions

Java 12 introduces a new preview feature called "Switch Expressions", which enhances the traditional switch statement. Switch expressions allow developers to use the switch statement as an expression, resulting in more concise and readable code. This feature simplifies the handling of multiple conditions, offering developers a new coding paradigm that can improve code maintainability and efficiency.

Compact Number Formatting

Java 12 introduces a new number formatting feature called "Compact Number Formatting". This feature allows developers to format numbers in a more compact and localized manner. For example, it enables formatting large numbers in a shorter format such as "1K" instead of "1000". Compact number formatting can be particularly useful in scenarios where space is limited, such as user interfaces and reports, providing a more concise and visually appealing representation of numeric data.

Teardown of Unused Classes

Java 12 aims to improve the efficiency and performance of the Java Runtime Environment (JRE) by introducing a new experimental feature called "Teardown of Unused Classes". This feature allows the JRE to dynamically unload

unnecessary classes from memory, freeing up valuable resources. By reducing the memory footprint, Java applications can run more efficiently, resulting in improved overall performance.

Improved G1 Garbage Collector

Java 12 includes enhancements to the Garbage First (G1) garbage collector, making it more efficient and responsive. These improvements optimize the G1 collector's behavior to reduce pause times, resulting in better overall application performance. The enhanced G1 garbage collector is particularly beneficial for applications that require low-latency responses and need to manage large amounts of memory efficiently.

Java 11 and 12 bring exciting new features and enhancements that empower Java developers to write cleaner, more efficient, and maintainable code. From the of var for lambda parameters to the improved G1 garbage collector, these new releases offer a range of capabilities that enhance the Java development experience. As a Java developer, it's essential to stay updated with the latest features and leverage them to build better applications. So, why wait? Start exploring Java 11 and 12 today and harness the power of these new features to take your Java development skills to greater heights!



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Enhance your development skills with Java's state-of-the-art features and projects to make your applications leaner and faster

Key Features

- Overcome the challenges involved in migrating to new versions of Java
- Discover how Oracle has bridged the gap between Java and native code
- Make the best use of new Java features and libraries in your applications

Book Description

With its new six-monthly release cadence, Java is moving forward faster. In addition to planned version releases, a lot of work is currently being undertaken on various Java projects at Oracle. In order to make best use of the new features in their applications and libraries, you must be well-versed with the most recent advancements.

Java 11 and 12 – New Features will take you through the latest developments in Java, right from variable type inference and simplified multithreading through to performance improvements, which are covered in depth to help you make your applications more efficient. This book explains the relevance and applicability of Java's new features, and answers your questions on whether to invest in migrating to new Java versions and when to migrate. You'll also get to grips with platform features, such as AppCDS and new garbage collectors, to tune and optimize your application—from reduced launch time and latency to improved performance and throughput.

By the end of this book, you will be equipped with a thorough understanding of the new features of Java 11, 12, and Project Amber, and possess the skills to apply them with a view to improving your application's performance.

What you will learn

- Study type inference and how to work with the var type
- Understand Class-Data Sharing, its benefits, and limitations
- Discover platform options to reduce your application's launch time
- Improve application performance by switching garbage collectors
- Get up to date with the new Java release cadence
- Define and assess decision criteria for migrating to a new version of Java

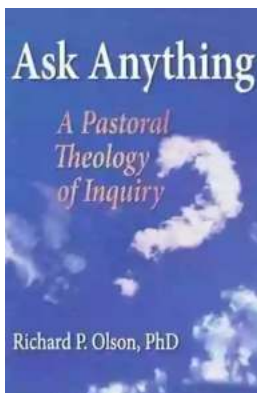
Who this book is for

If you're an executive or solutions architect responsible for technology selection or Java migration decisions, this Java book is for you. You'll also benefit from this book if you're a computer science enthusiast curious to learn about the latest and upcoming Java features. This book will help you migrate your solutions from Java 8 or older to the latest Java release.

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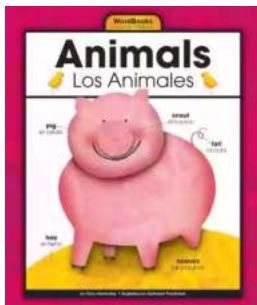
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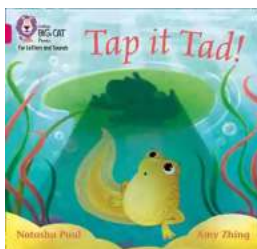
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